

### Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1-6. (Canceled)
7. (Currently Amended) The ~~cermet material~~ rock bit as recited in claim + 33 wherein the iron-based binder alloy comprises in the range of from about 10 to 40 percent by weight Ni based on the total weight of the binder alloy.
- 8-10. (Canceled)
11. (Currently Amended) The ~~cermet material~~ rock bit as recited in claim + 33 wherein the difference between the coefficient of thermal expansion for the binder alloy and the first phase of grains is less than about 5 ppm/°C.
- 12-32. (Canceled)
33. (Currently Amended) A rotary cone rock bit for drilling earthen formations comprising:  
a body having a number of legs that extend therefrom;  
cutting cones rotatably disposed on an end of each leg;  
a plurality of cutting inserts disposed in the cutting cones, wherein at least one of the plurality of cutting inserts has an outer, formation engaging wear surface including a cermet material having engineered properties of fractures toughness, thermal shock resistance, and wear resistance, the cutting inserts are formed from a cermet material consisting of:  
a first phase of tungsten carbide grains; and  
a second phase of binder alloy-ductile phase bonding the grains, ~~wherein the first phase of grains is tungsten carbide (WC); wherein the second ductile phase is binder alloy comprises of~~ Co, Ni, Fe, C and Mn;  
  
wherein the binder alloy comprises in the range of from about 10 to 30 percent by weight ~~cobalt~~ Co based on the total weight of the binder alloy, wherein the cermet material binder alloy comprises in the range of from about 10 to 30 percent by weight binder alloy of the total cermet material, and wherein the binder alloy has a coefficient of

thermal expansion less than about 6 ppm/°C within a temperature range of from 100 to 700°C.

34. (Original) The rock bit as recited in claim 33 wherein the difference between the coefficient of thermal expansion for the binder alloy and the first phase of grains is less than about 2 ppm/°C.

35-36. (Canceled)

37. (Currently Amended) The rock bit as recited in claim 33 wherein the ~~iron-based~~ binder alloy comprises in the range of from about 10 to 40 percent by weight Ni based on the total weight of the binder alloy.

38-41. (Canceled)

42. (Currently Amended) The rock bit as recited in claim 33 wherein the combined ~~WC~~ tungsten carbide grains and binder alloy has a coefficient of thermal expansion that is less than that of conventional WC-Co at the same temperature and having the same metal content within a temperature range of from 100 to 700°C.

43-47. (Canceled)

48. (New) A plurality of cutting elements attached to a drill bit used for drilling subterranean formations, wherein at least one of the plurality of cutting elements has an outer, formation engaging wear surface including a cermet material consisting of:

a first phase of tungsten carbide grains; and

an iron-based binder alloy bonding the grains together formed from Co, Ni, C and Mn, wherein the binder alloy comprises about 10 to 30 percent by weight Co;

wherein the cermet material has combined properties of wear resistance, thermal shock resistance and fracture toughness.

49. (New) The cutting element as recited in claim 48 wherein the binder alloy has a coefficient of thermal expansion of less than about 10 ppm/°C within a temperature range of from 100 to 700°C.

50. (New) A rock bit comprising a body having a number of legs that extend therefrom, cutting cones rotatably disposed on an end of each leg, and the plurality of the cutting inserts recited in claim 48 disposed on the cutting cones.

51. (New) A rotary cone rock bit for drilling subterranean formations comprising:

a body having a number of legs that extend therefrom;

cutting cones rotatably disposed on an end of each leg;

a plurality of cutting inserts disposed in the cutting cones, wherein at least one of the cutting inserts has a formation engaging wear surface including a cermet material having engineered properties of fracture toughness, thermal shock resistance, and wear resistance, the cermet material comprising:

a first phase of tungsten carbide grains;

a second phase of binder alloy bonding the grains, wherein the binder alloy comprises Co, Ni, Fe, C and Mn, wherein the binder alloy comprises in the range of from about 10 to 30 percent by weight Co based on the total weight of the binder alloy, wherein the cermet material comprises in the range of from about 10 to 30 percent by weight binder alloy, and wherein the binder alloy has a coefficient of thermal expansion less than about 6 ppm/°C within a temperature range of from 100 to 700°C; and

a ductile phase, wherein particles formed from the grains and binder alloy are disbursed within the ductile phase, and wherein the ductile phase is selected from the group consisting of Co, Ni, Fe, W, Mo, Ti, Ta, V, Nb, B, Cr, Mn and alloys thereof.

52. (New) A plurality of cutting elements attached to a drill bit used for drilling subterranean formations, at least one of the cutting elements being formed from a cermet material comprising:

a first phase of tungsten carbide grains;

an iron-based binder alloy bonding the grains together formed from Co, Ni, C and Mn, wherein the binder alloy comprises about 10 to 30 percent by weight Co; and

a ductile phase, wherein particles formed from the grains and binder alloy are disbursed therein, the ductile phase being selected from the group consisting of Co, Ni, Fe, W, Mo, Ti, Ta, V, Nb, B, Cr, Mn and alloys thereof;

wherein the cermet material has combined properties of wear resistance, thermal shock resistance and fracture toughness, and wherein the cermet material forms a formation engaging wear surface on the cutting element.